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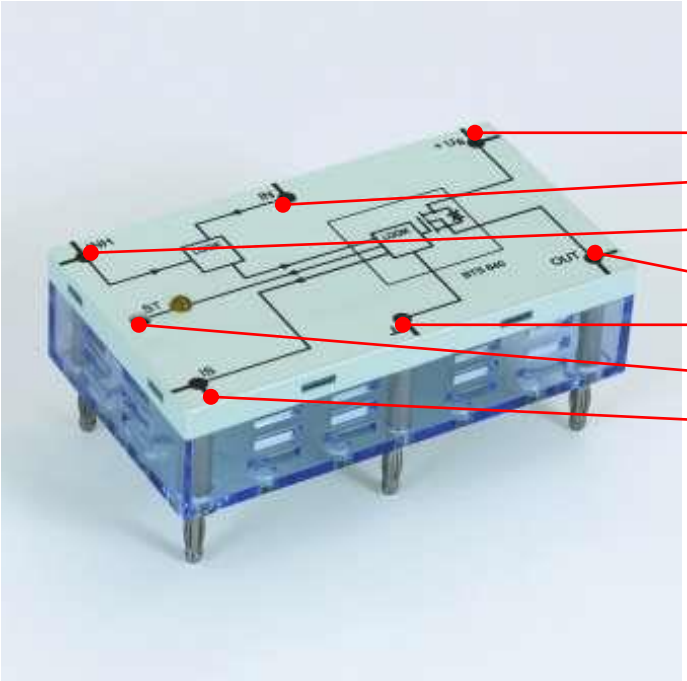
LD DIDACTIC

10/14-W2010-Wei

Instruction Sheet 578 774

Power Switch BTS640 12 A/12 V



① Positive supply voltage
② Control input
③ INH input
④ Charge output
⑤ Digital ground
⑥ Diagnostic output
⑦ Current measurement output

1 Description

N-channel vertical power FET with charging pump, ground with CMOS-compatible control input and diagnostic output, proportional load current measurement output, monolithic structure in Smart SIPMOS® technology, equipped with integrated protective functions.

Safety notes

- Before initial operation, make sure all ground connections are plugged in!
- Only operate the device with an appropriate power supply.
- Make sure all connections are correct.

2 Application

- µC-compatible power circuit breaker with diagnostic function for 12 V and 24 V loads connected to the ground
- All types of ohmic, inductive and capacitive loads
- Replaces electromechanical relays, fuses and discrete circuits

3 Technical Data

- Operating voltage: U_{BBmax} = 43 $V_{=}$
- Switching voltage: U_{IN} = -10 – +16 $V_{=}$
- Nominal load current: I_L = 12.6 $A_{=}$
- Resistance at I_L = 5 A: 27 mΩ
- Peak short-circuit current: $I_{L(SCp)}$ = 50 A
- Thermal overcurrent protection at: T_{jt} = 150 °C

4 Description of Inputs and Outputs

Connect ① and ⑤ to the 12 V power supply and the load to the ground on ④. Link ② to the positive voltage to switch the load on. Linking ③ to the ground prevents the load from switching on. For diagnostic purposes, ⑥ outputs the FET's state; ⑦ carries a voltage proportional to the load current.

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